

CASE STUDY

HOPKINS PUBLIC SCHOOLS

SUMMARY

115 (CONTRACTED) BUSES   **6,900 STUDENTS TRANSPORTED EACH DAY**

THE CHALLENGE

Looking for a way to eliminate near strikes and strikes of students during school bus loading/unloading/ increasing student safety outside the bus.

THE SOLUTION

The Safe Fleet Predictive Stop Arm™ (currently being tested on four buses with intent to roll out in further buses operating in routes presenting most risk to students).

TIERING SYSTEM

- 3 Tier System
- First Tier is Secondary School
- Second and Third Tier split among Elementary School

ROUTES

- 87 Regular Routes
- 20-35 Special Education Routes

THE RESULTS

Within months of implementation, the Predictive Stop Arm stopped a student from walking into an oncoming motorist who had ignored the stop arm. Hopkins Public Schools has gained additional peace-of-mind knowing they are taking critical steps to help keep students out of harm's way (the system notifies students not to step out onto the street if a stop arm violation is predicted).

The Predictive Stop Arm™ stopped a student from walking into an oncoming motorist

Drivers also appreciate the additional level of support the Predictive Stop Arm system provides. This is particularly true in high stress, high stop arm violation frequency routes.

THE NEED FOR INCREASED SAFETY

The past 10 years have shown both promising and concerning nationwide trends related to student safety outside the school bus. 17 students died in 2008 and 13 in 2009. 2010-2014 had between 8-10 student deaths each year. 2014 and 2015 showed improvement with 4 deaths occurring in each of these years. But the number of fatalities increased again in 2016 with the death of 8 students. And then the 2017-2018 school year shook the nation with five young lives lost in the space of one week – all due to preventable school bus loading and unloading accidents .

This is why Derrick Agate, the Transportation Supervisor of Hopkins Public Schools began testing the Safe Fleet Predictive Stop Arm™ , an innovative solution that proactively aims to keep students from stepping onto the road when a stop arm violation is likely to occur.

Within months of the initial implementation, Hopkins Public Schools and the Predictive Stop Arm (PSA) were receiving positive feedback from the School Administration, several media outlets as well as U.S. Legislators who are looking to increase student safety outside the bus. The System was also integral in protecting one specific student at the close of the school year. “The student got off the bus while looking at their cell phone,” states Derrick. “The stop arm was clearly extended and an oncoming vehicle was approaching quickly. The PSA audible alarm literally kept this student from getting hit by the passing motorist.”



“The Predictive Stop Arm audible alarm literally kept this student from getting hit by the passing motorist.”

Derrick Agate

THE SEARCH FOR A SOLUTION TO KEEP STUDENTS FROM HARM

The Predictive Stop Arm uses patents-pending and other advanced technologies to monitor oncoming traffic, measuring the vehicle’s speed and distance from the school bus. Analytics algorithms process the data from the radar sensors and determine whether the vehicle has sufficient time to slow down and stop or whether a stop arm violation is probable. If the system perceives that students should not cross, audible and visual warnings are issued to the driver and audible warnings are issued to the students advising them to get back.

Derrick Agate began his search for a solution to help address the issue of stop arm violations after hearing a bus operator from a nearby district recount a very close call. A motorist had passed his bus while the stop arm was extended and a student was unloading. The motorist struck the child and drove away from the scene. The student was not fatally injured, but the story stayed with Derrick. Rather than solely focusing on methods to catch stop arm violators, Derrick chose to look for a solution that could keep a student from getting hit in the first place.

“Catching a stop arm violator results in punitive charges for the driver, but the students remain at risk. I’m less interested in prosecuting the motorist than I am about keeping my students safe.”

Derrick Agate



STOP ARM CAMERAS AS STAND ALONE TOOLS DON'T ELIMINATE THE RISK

Derrick took an in-depth look into the stop arm camera as a stand-alone tool and found that while the solution did offer a deterrent to illegal passbys; it did not eliminate the underlying risk to the students, the parents, the school board, and the school board's credibility and authority.



INCREASED SAFETY WITH THE PREDICTIVE STOP ARM AND UNEXPECTED BENEFITS

THE COMBINED STRENGTHS OF THE PREDICTIVE STOP ARM AND STOP ARM CAMERAS

With the goal first and foremost to keep students safe and to bring in law enforcement when necessary, Hopkins Public Schools chose to integrate the Predictive Stop Arm with Stop Arm Cameras for a comprehensive solution to student safety outside the school bus. These two solutions working together

allowed Hopkins to approach the issue more holistically — initiating prosecution in the event action is appropriate and can produce a positive outcome (change a behavior or make a positive difference), while helping to keep the students from risk in the first place.

Within weeks of implementation, drivers noted many instances where students were cautioned to stay back when risk was detected. And there was the one instance previously noted in which Derrick feels the Predictive Stop Arm kept a student from walking directly into an oncoming vehicle that was illegally passing his bus. The safety of that one student was an immediate return on investment for Derick and the school.

Derrick points out that his drivers also feel much more supported now that the Predictive Stop Arm is on-board and they also find the routes with high frequency violations are less stressful to navigate. Derrick is the first to state, the Predictive Stop Arm doesn't replace a bus driver's responsibility, he feels it adds another level of student safety and helps

the driver remain focused on the task at hand. The driver can see the system is predicting a likely stop arm violation, sees the car approaching and knows the system is predicting the very action the driver is about to witness. The driver can still honk the bus horn and follow established processes even as the PSA is alerting the students to get back and not cross the road.

Many bus drivers think of the students as their kids — not one driver wants to see an injury of any kind occur to one of their kids. And yet, drivers feel powerless when it comes to protecting students from injury outside the bus. Drivers have noted, the Predictive Stop Arm helps alleviate some of this pressure.



WHAT'S NEXT FOR HOPKINS PUBLIC SCHOOLS

"We'll be identifying other areas where this technology could benefit our students," says Derrick. "I don't believe we need the Predictive Stop Arm in neighborhoods with very little traffic, however, we know there are high-traffic, high-incident areas where students remain vulnerable. We'll be working with our drivers to determine where best to install the system next.



NOW IS THE TIME TO ACT

Derrick Agate is also the Past-President of the Minnesota Association for Pupil Transportation (MAPT). In this capacity, he gets the opportunity to work closely with local law enforcement and representatives of all districts in his area. He is deeply involved in issues related to both student transportation and the emerging technology that is designed to address these issues, for the entire State.

Derrick firmly believes distracted driving is the reason for increased stop arm violations and associated student injury and death. “Motorists don’t intentionally want to hit a child, but they get distracted, and not just with cell phones,” says Agate. “People do so much in their cars right now — there are more things to distract motorists when they are in their cars than ever before.”

Derrick believes we are going to see an increase in violations and student strikes until the day our vehicles can either communicate with each other or all cars on the road are fully autonomous. “Until then,” says Agate, “who wants to be the person who says we had the opportunity to eliminate this, but we didn’t. If I were talking to a Transportation Director who was considering the Predictive Stop Arm, I would tell them this technology is the best thing I’ve seen in a long time and if we are talking about keeping our kids safe, this is a tool that will keep the child from being in a position where they are going to get hit.”

“

This technology is the best thing I’ve seen in a long time. This tool will keep a child from being in a position where they are going to get hit.”

Derrick Agate

1085-Hopkins-CS-SB-092419

Copyright ©2019 Safe Fleet and its subsidiaries. All rights reserved. No part of this publication may be reproduced by any means without written permission from Safe Fleet. The information in this publication is believed to be accurate. However, Safe Fleet does not make any representation or warranty to that effect and does not assume responsibility for any consequences resulting from use of such information. Revisions or new editions of the publication may be issued (or not issued) in our discretion to incorporate such changes. **IMPORTANT NOTICE:** No system can prevent all incidents. Inattentive drivers, weather, erratic student behavior, and other factors can inhibit detection and overall system performance. Drivers must always keep proper lookout.

1.877.630.7366
safefleet.net

SAFE  FLEET
Driving Safety Forward™